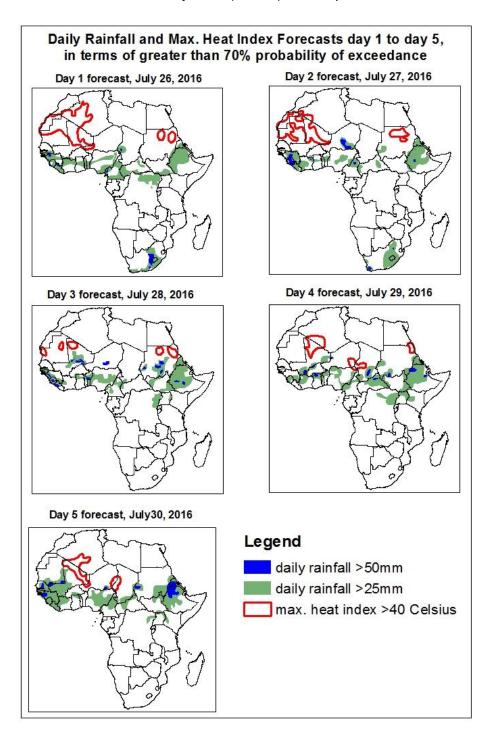
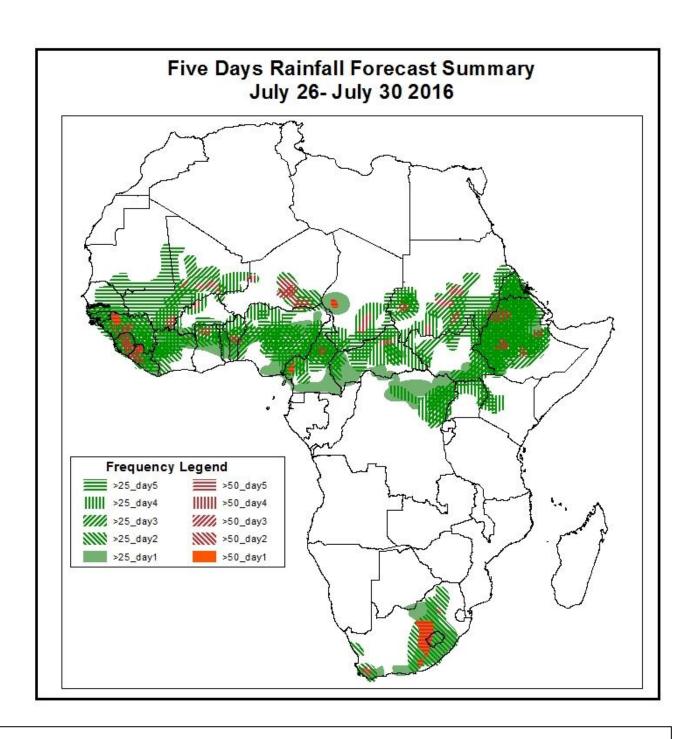
- 1. Rainfall, Heat Index and Dust Concentration Forecasts, (Issued on July 25, 2016)
- 1.1. Daily Rainfall and Maximum Heat Index Forecasts (valid: July 26– July 30 2016)

  The forecasts are expressed in terms of high probability of precipitation (POP) and high probability of maximum heat index, based on the NCEP/GFS, ECMWF and the NCEP Global Ensemble Forecasts System (GEFS) and expert assessment.



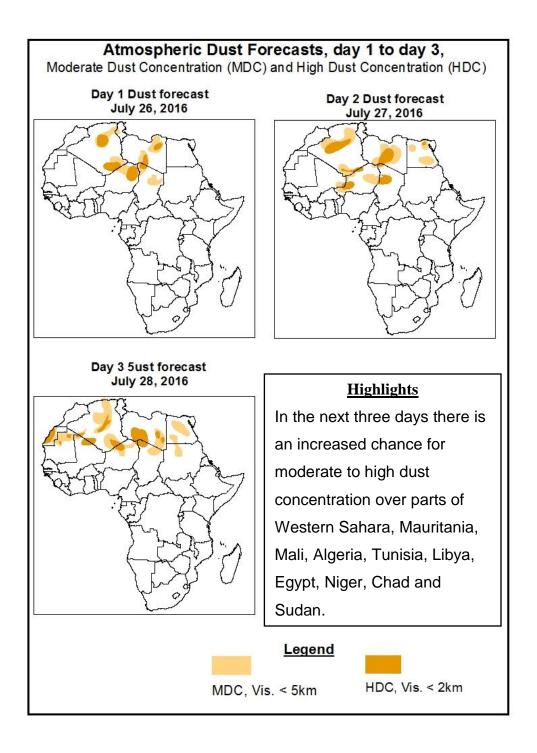


# **Highlights**

In the next five days, westward propagating lower-level cyclonic systems across West Africa and lower level wind convergences across the central and eastern Sahel, Sudan and Ethiopia are expected to enhance rainfall in their respective regions. Therefore, there is an increased chance for two or more days of moderate to heavy rainfall over portions of Mali, Gambia, Southern Mauritania, Guinea Bissau, Guinea, Sierra Leone, Liberia, portions of Cote d'Ivoire, northern Togo, portions of Burkina Faso, Benin, Niger, Nigeria, Chad, Cameroon, CAR, Sudan, South Sudan, DRC, Uganda and South Africa, eastern Kenya, portions of Ethiopia, and Eritrea.

## 1.2. Atmospheric Dust Concentration Forecasts (valid: July 26 – July 28, 2016)

The forecasts are expressed in terms of high probability of dust concentration, based on the Navy Aerosol Analysis and Prediction System, NCEP/GFS lower-level wind forecasts and expert assessment.



#### 1.3. Model Discussion, Valid: July 26 – July 30, 2016

The Azores high pressure system over the Northeast Atlantic is expected to intensify, with its central pressure value increasing from 1024-hPa to 1028-hPa through 24 to 72 hours, and tends to maintain average central pressure value of 1024-hPa through 96 to 120 hours.

The St. Helena High pressure system over the Southeast Atlantic Ocean is expected to weaken, with its central pressure value increasing from 1032-hPa to 1023-hPa during the forecast period.

The Mascarene high pressure system over the Southwest Indian Ocean is expected to weaken, with its central pressure value increasing from 136-hPa to 1020-hPa through 24 to 120 hours.

The 1016mb isobar, associated with the East African ridge is expected to remain near the latitudes of Mozambique during through 48 to 120 hours.

The central pressure values associated with the heat low in western Sahel is expected remain in the range between 1005hPa and 1006hPa during the forecast period, while the heat low over the central Sahel is expected remain in the range between 1003hPa and 1006hPa during the forecast period. The central pressure value associated with the heat low across Sudan is expected to maintain an average central pressure value of 1004hPa over the next 48 to 120 hours.

At 925hPa provided an anticyclonic circulation and its associated ridge is expected to prevail across Libya while expanding westward into neighboring regions during the forecast period. Strong wind associated with this system may lead to moderate to high dust concentration across portions of Western Sahara, Mauritania, Mali, Algeria, Tunisia, Libya, Egypt, Niger, Chad and Sudan.

At 850hPa level, a zonal wind convergence is expected to prevail in the region between Mali and Sudan.

At 700hPa level, northeasterly to easterly flow is expected to prevail across much of the Gulf of Guinea region, with wind speed occasionally exceeding 30kts over local areas in the Gulf of Guinea region during the forecast period. This will help to propagate convective activities southwestward into the western portions of the Gulf of Guinea region.

In the next five days, westward propagating lower-level cyclonic systems across West Africa and lower level wind convergences across the central and eastern Sahel, Sudan and Ethiopia are expected to enhance rainfall in their respective regions. Therefore, there is an increased chance for two or more days of moderate to heavy rainfall over portions of Mali, Gambia, Southern Mauritania, Guinea Bissau, Guinea, Sierra Leone, Liberia, portions of Cote d'Ivoire, northern Togo, portions of Burkina Faso, Benin, Niger, Nigeria, Chad, Cameroon, CAR, Sudan, South Sudan, DRC, Uganda and South Africa, eastern Kenya, portions of Ethiopia, and Eritrea.

There is an increased chance for maximum heat index to exceed 40°C over portions of Western Sahara, Mauritania and Mali, local areas in Niger, Chad and Sudan.

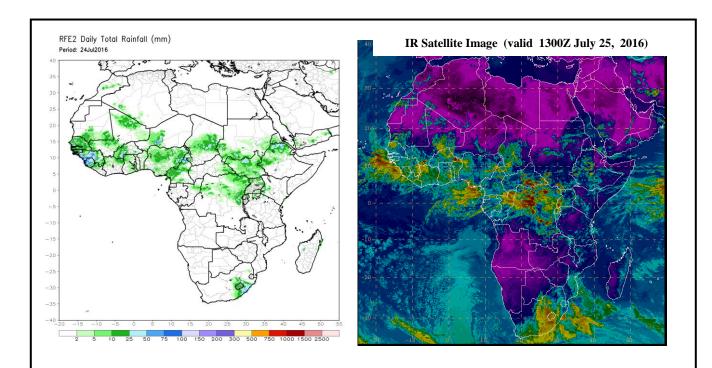
### 2.0. Previous and Current Day Weather over Africa

#### **2.1. Weather assessment for the previous day** (July 24, 2016)

Moderate to locally heavy rainfall was observed over portions of Mauritania and Mali, Senegal, Gambia, guinea Bissau, Guinea, Sierra, Leone, Liberia, Cote d'Ivoire, Ghana, Burkina Faso, Togo, Benin, Niger, Nigeria, Cameroon, Chad, CAR, DRC, South Africa, Uganda, South Sudan, Sudan, Ethiopia and Eritrea.

## 2.2. Weather assessment for the current day (July 25, 2016)

Intense convective clouds are observed portions of Mali and Burkina Faso, northern Benin, portions of Nigeria, Cameroon and CAR, northern Congo, portions of DRC, South Africa, Uganda, South Sudan and Ethiopia.



Previous day rainfall condition over Africa (Left) based on the NCEP CPCE/RFE and current day cloud cover (right) based on IR Satellite image.

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